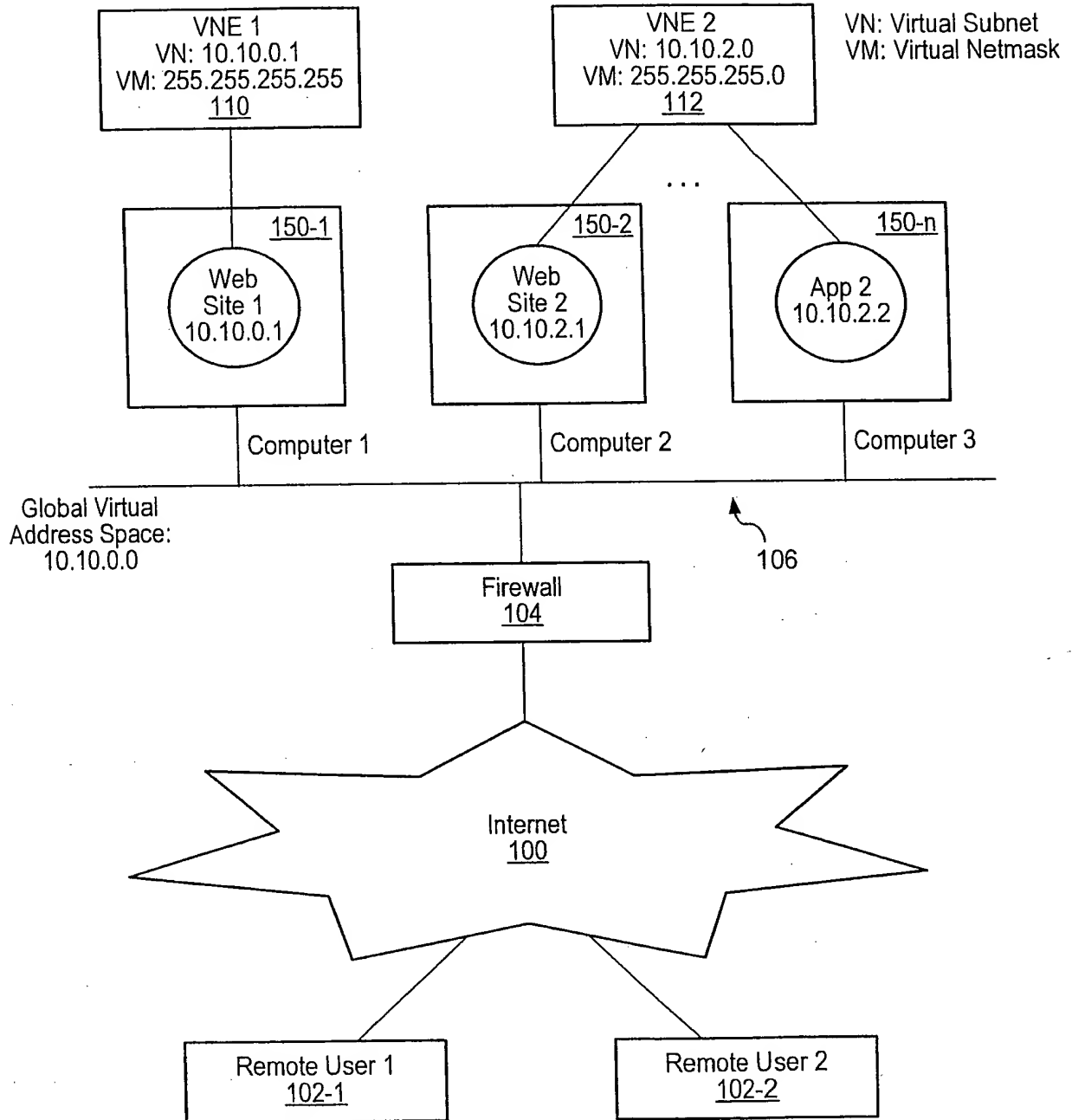


Replacement Sheet



The above diagram illustrates the virtual network environments. Virtual Network Environment 1 contains one application WEB SITE 1, is defined by the Virtual Network Address 10.10.0.1 resides solely on computer 1. Virtual Network Environment 2 contains two applications, WEB SITE 2 and APP 2, and spans two computers, Computer 2 and Computer 3. The virtual network of VNE 2 is 10.10.2.0.

Fig. 1

Replacement Sheet

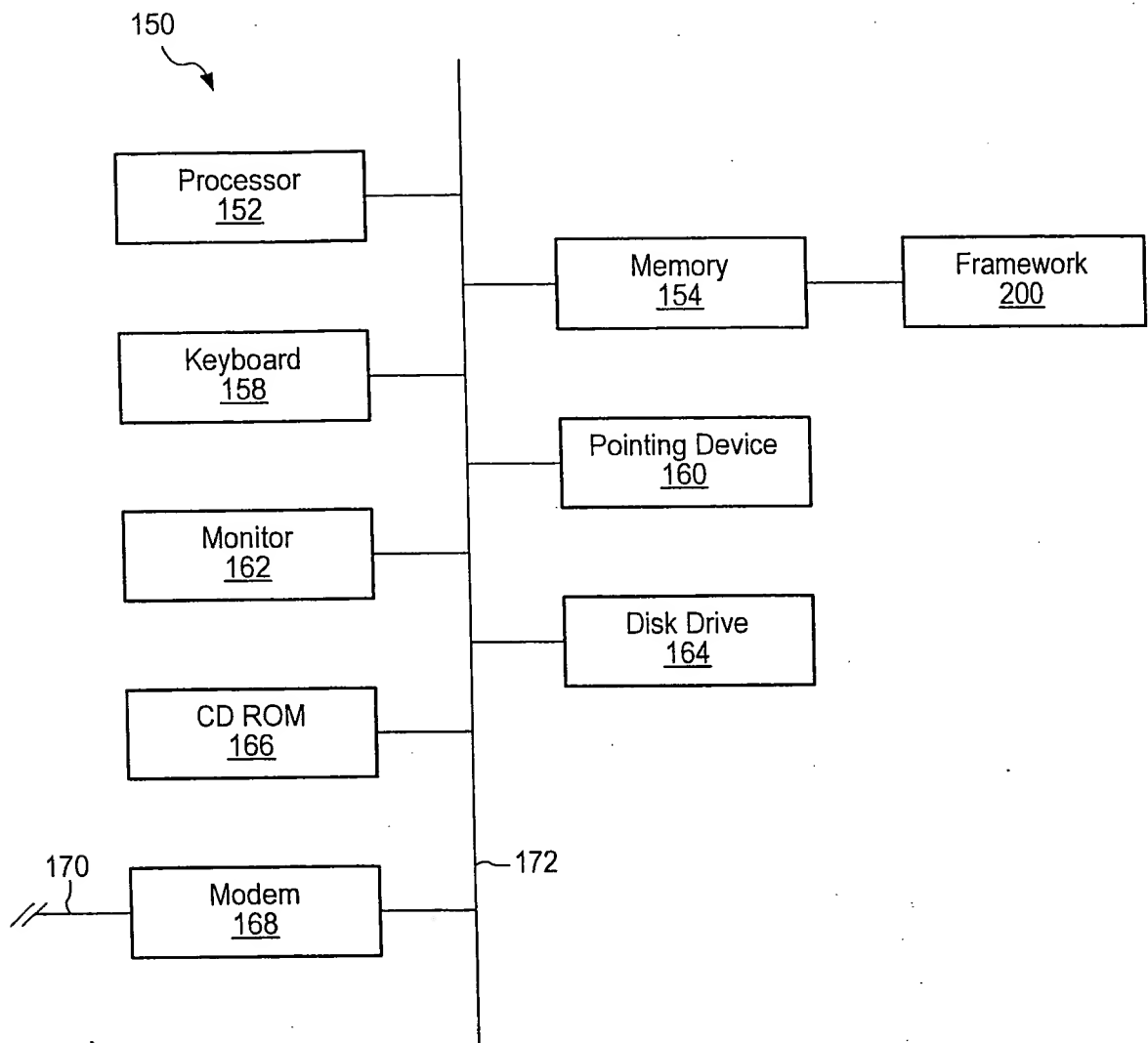
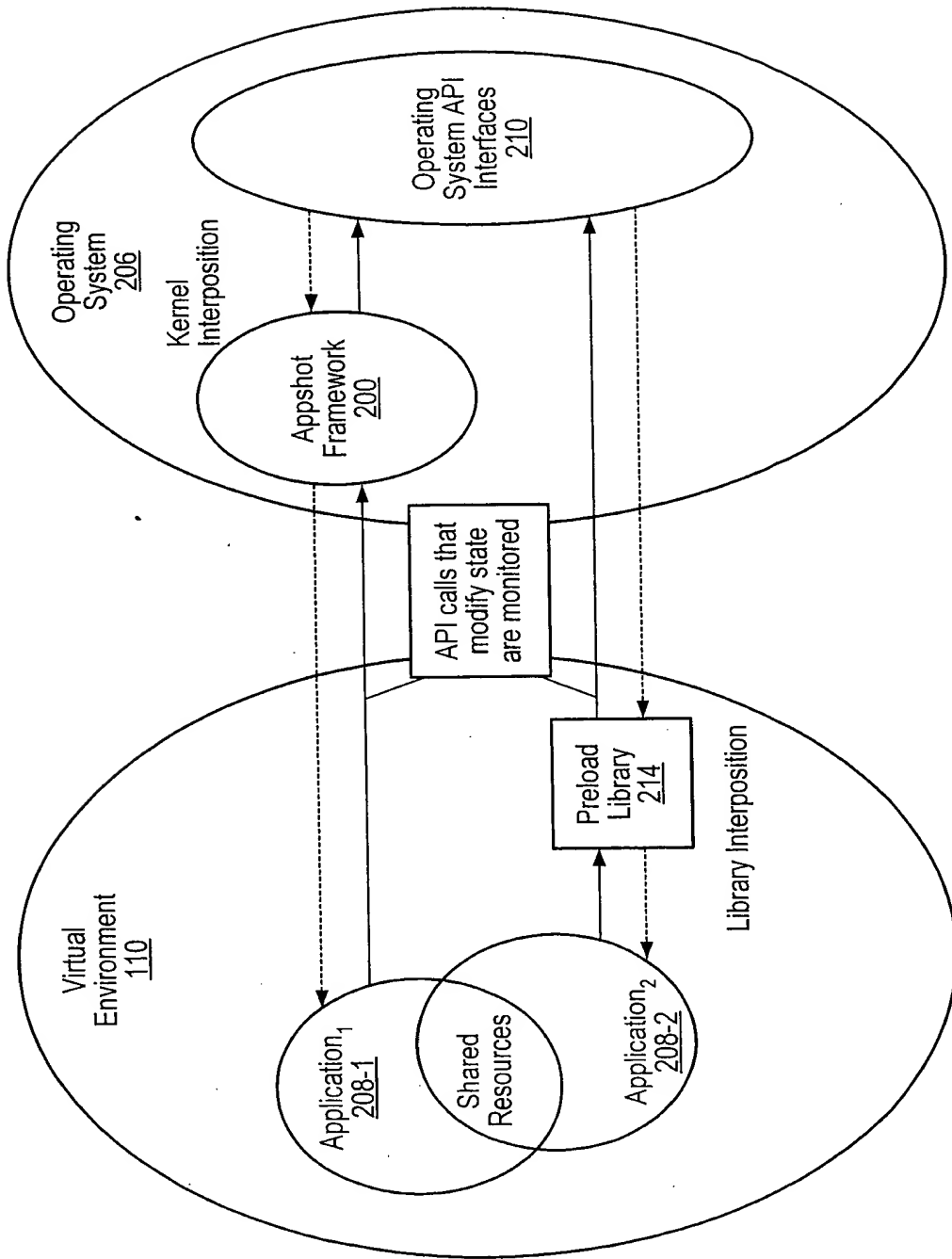


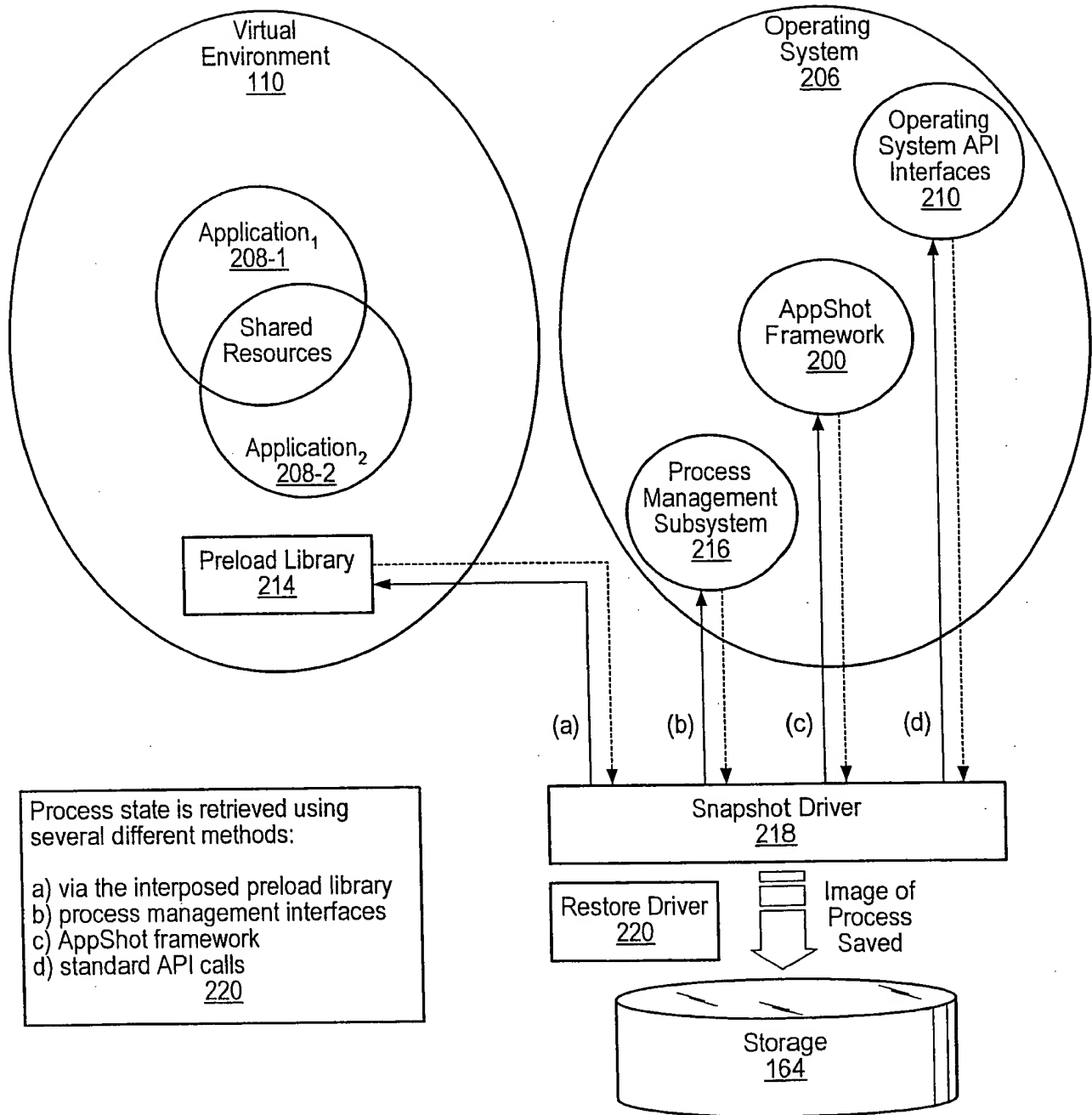
Fig. 2



Tracking application state via library and kernel interposition.

Fig. 3

Replacement Sheet



Capture of an application's run-time state.

Fig. 4

Replacement Sheet

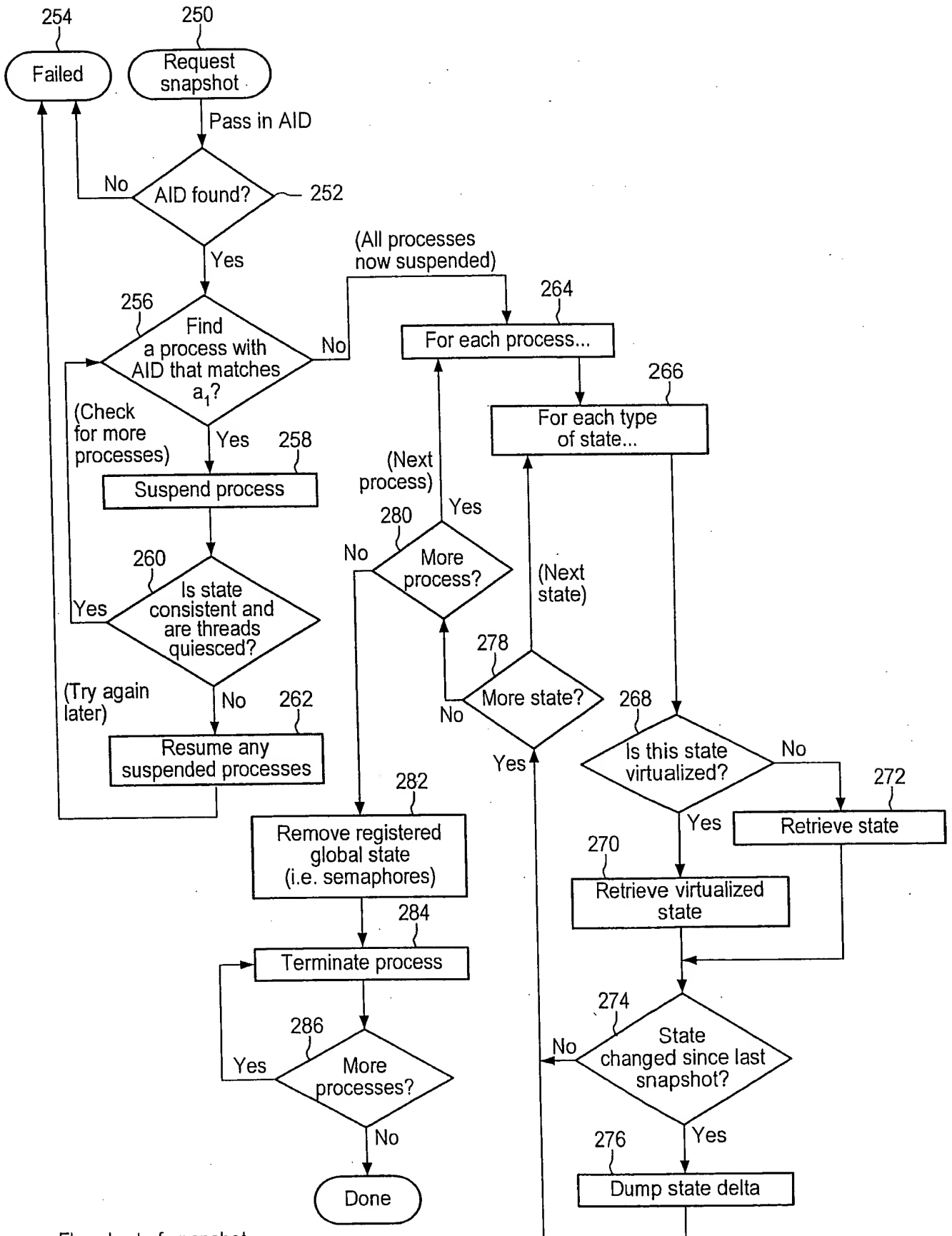


Fig. 5

Replacement Sheet

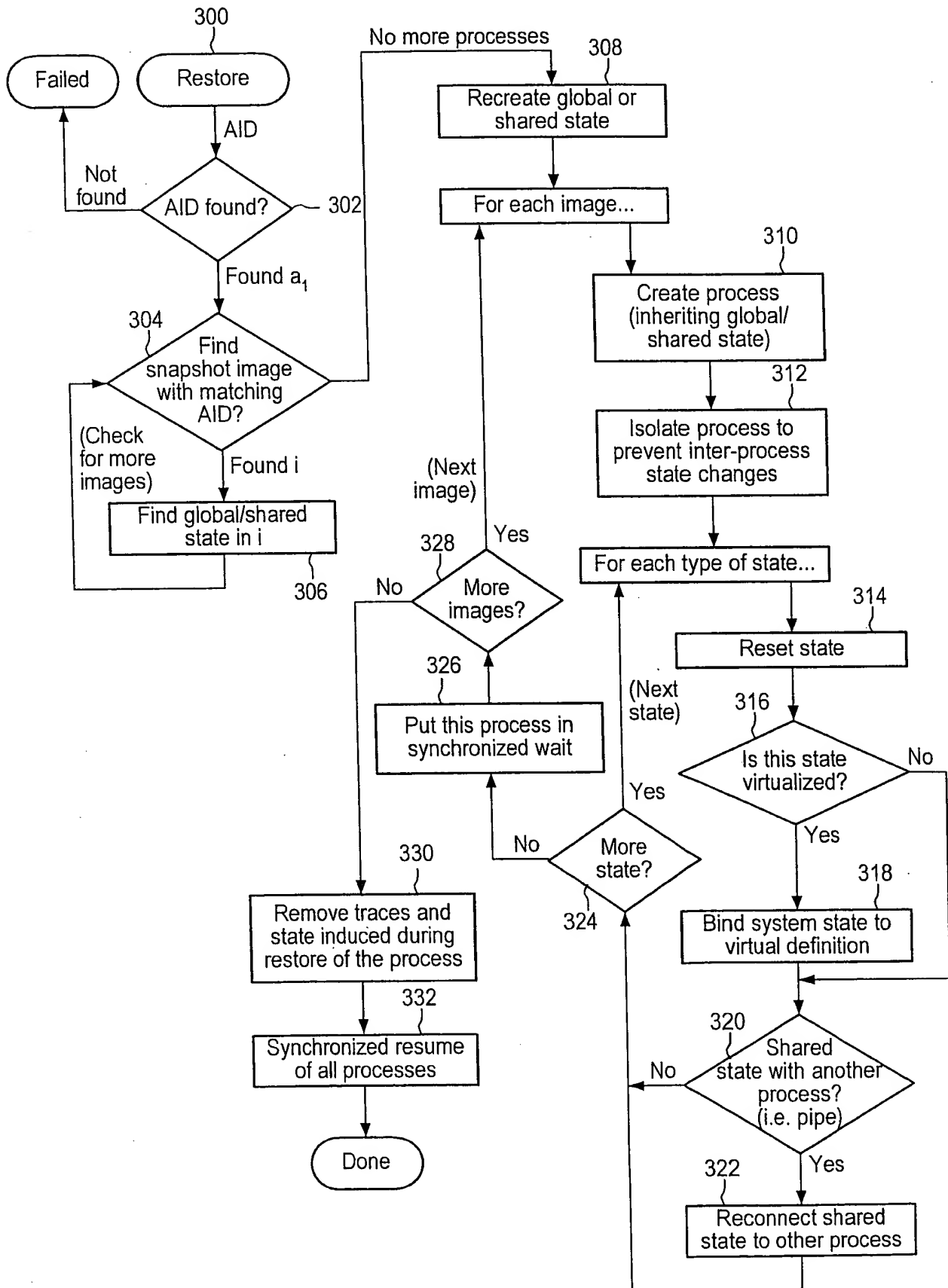


Fig. 6

Replacement Sheet

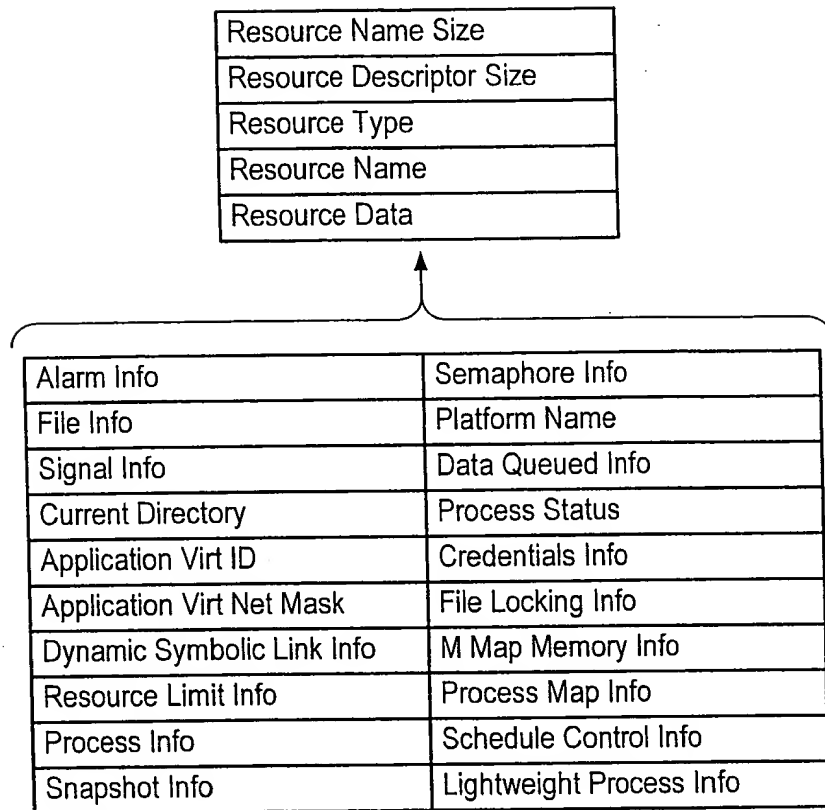


Fig. 7

Replacement Sheet

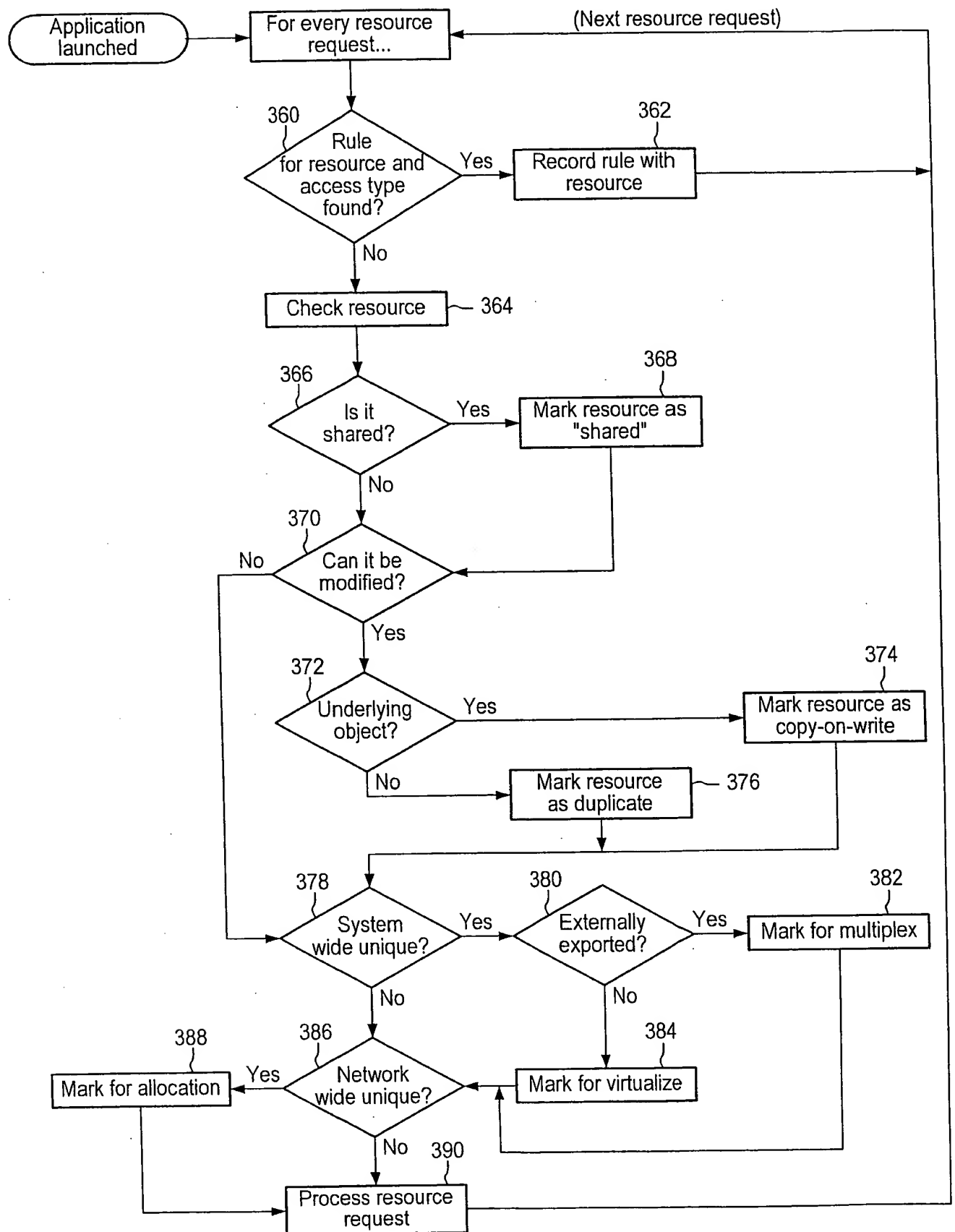


Fig. 8

Replacement Sheet

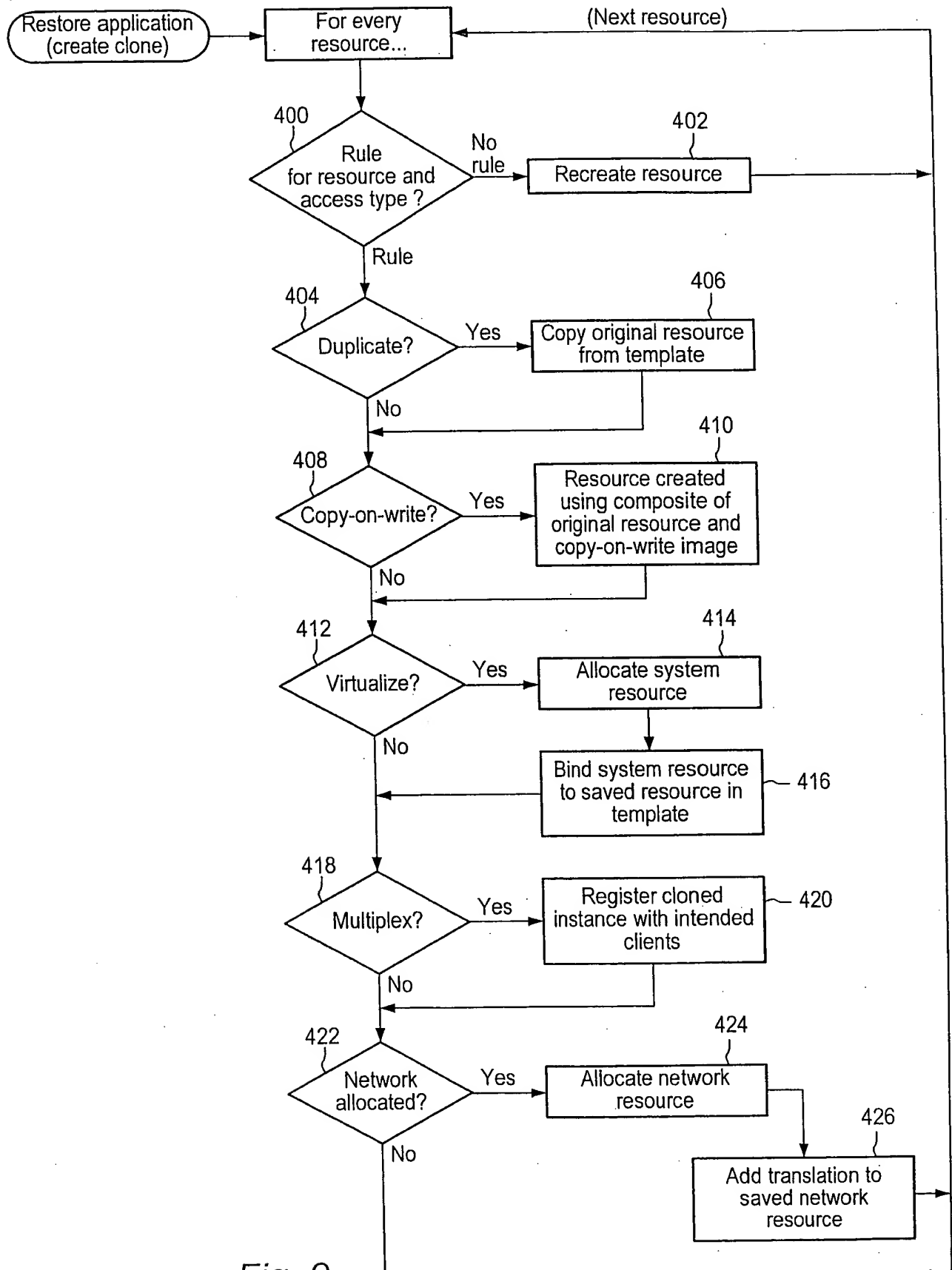
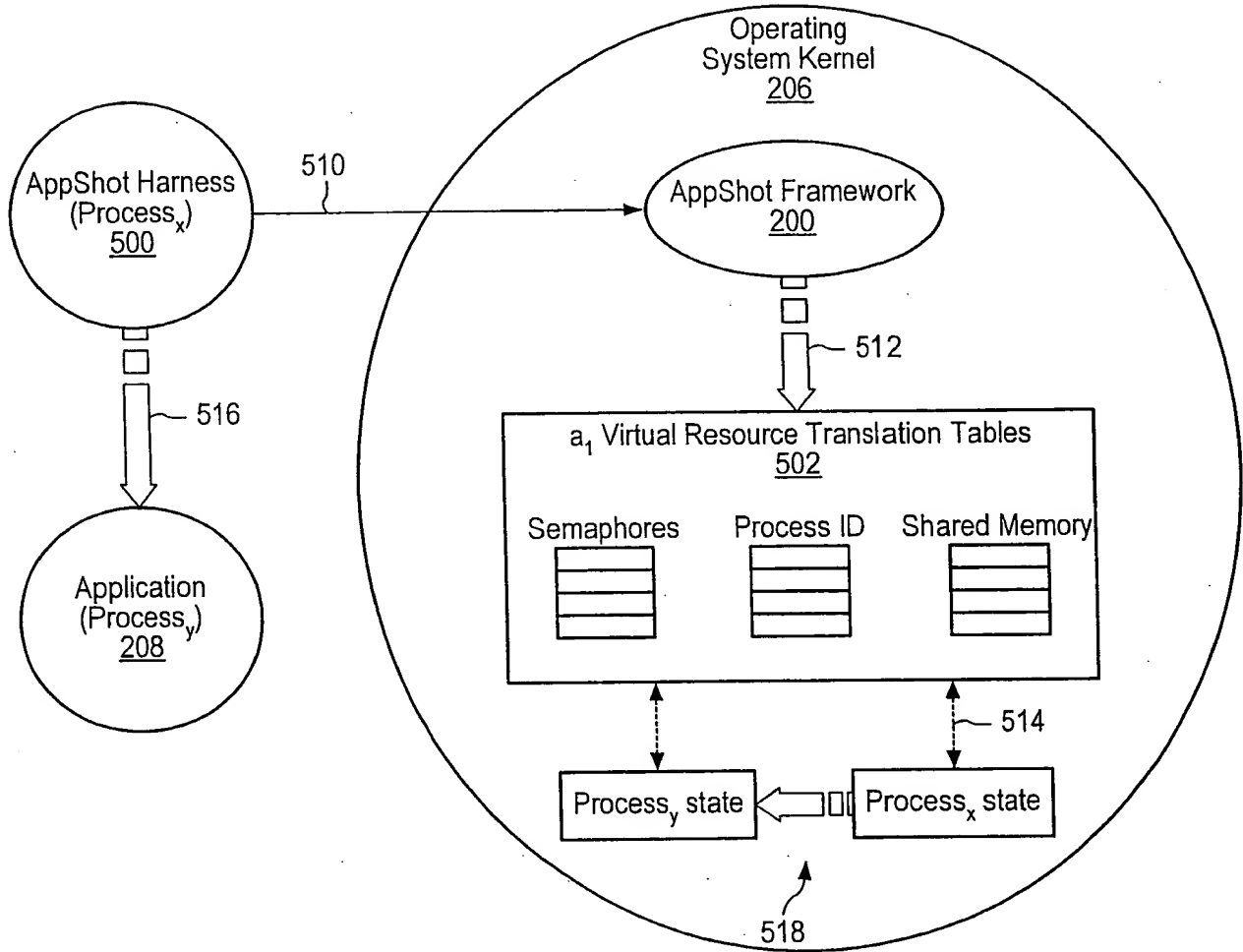


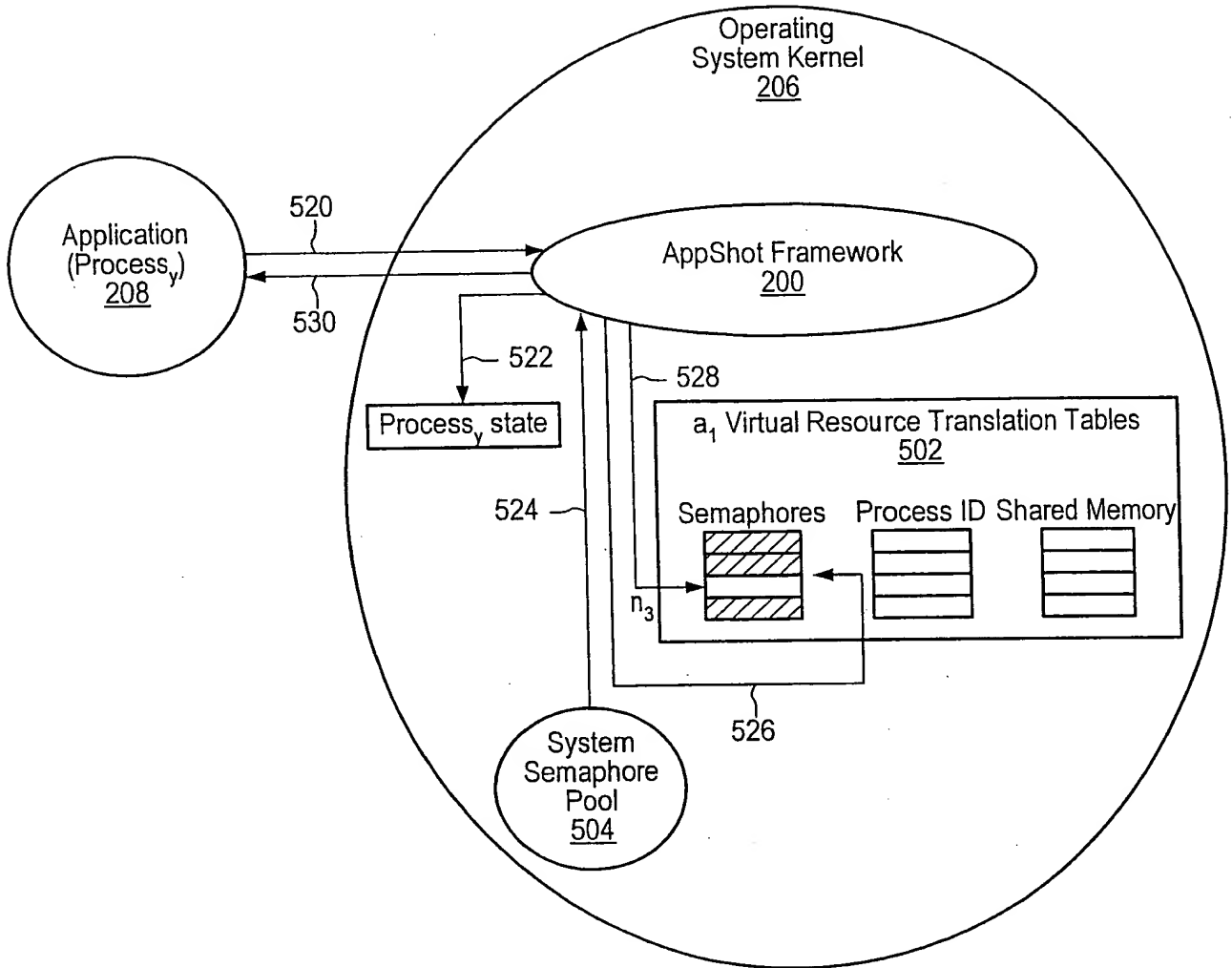
Fig. 9



Registration of an application using virtual resource ID's

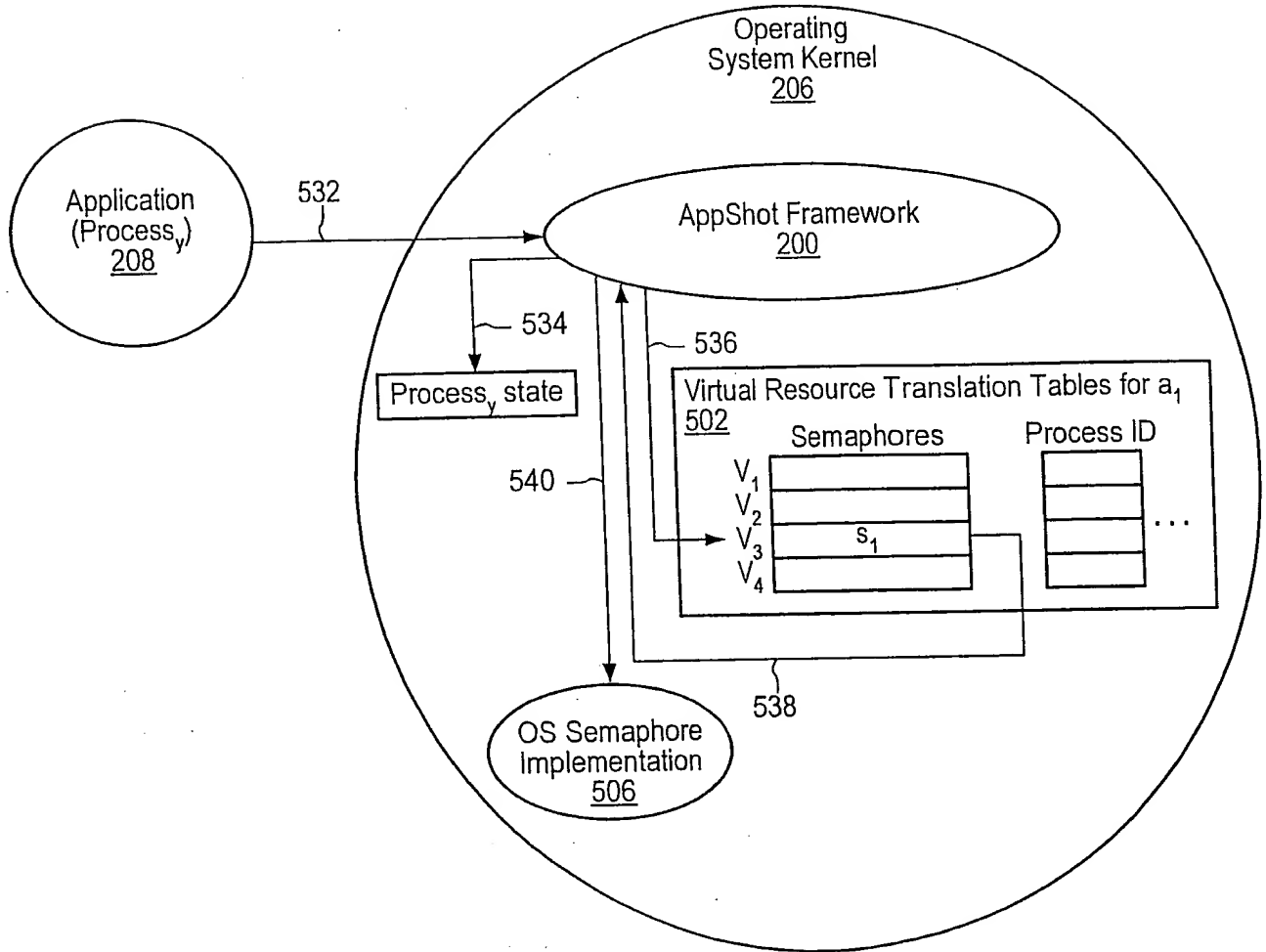
Fig. 10

Replacement Sheet



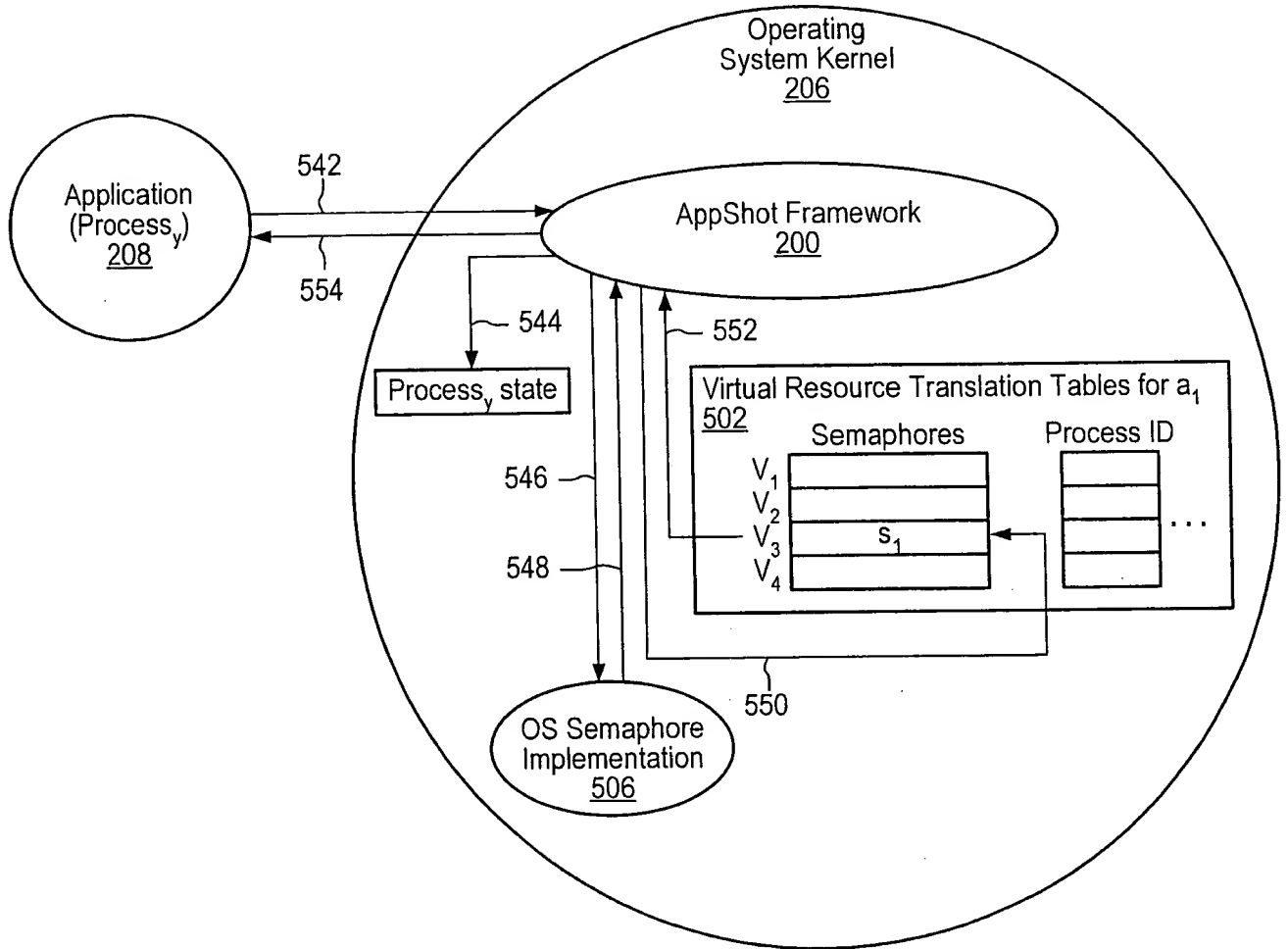
Allocation of a virtual resource (i.e. semaphore)

Fig. 11



Translation of a virtual resource (i.e. semaphore), virtual to system

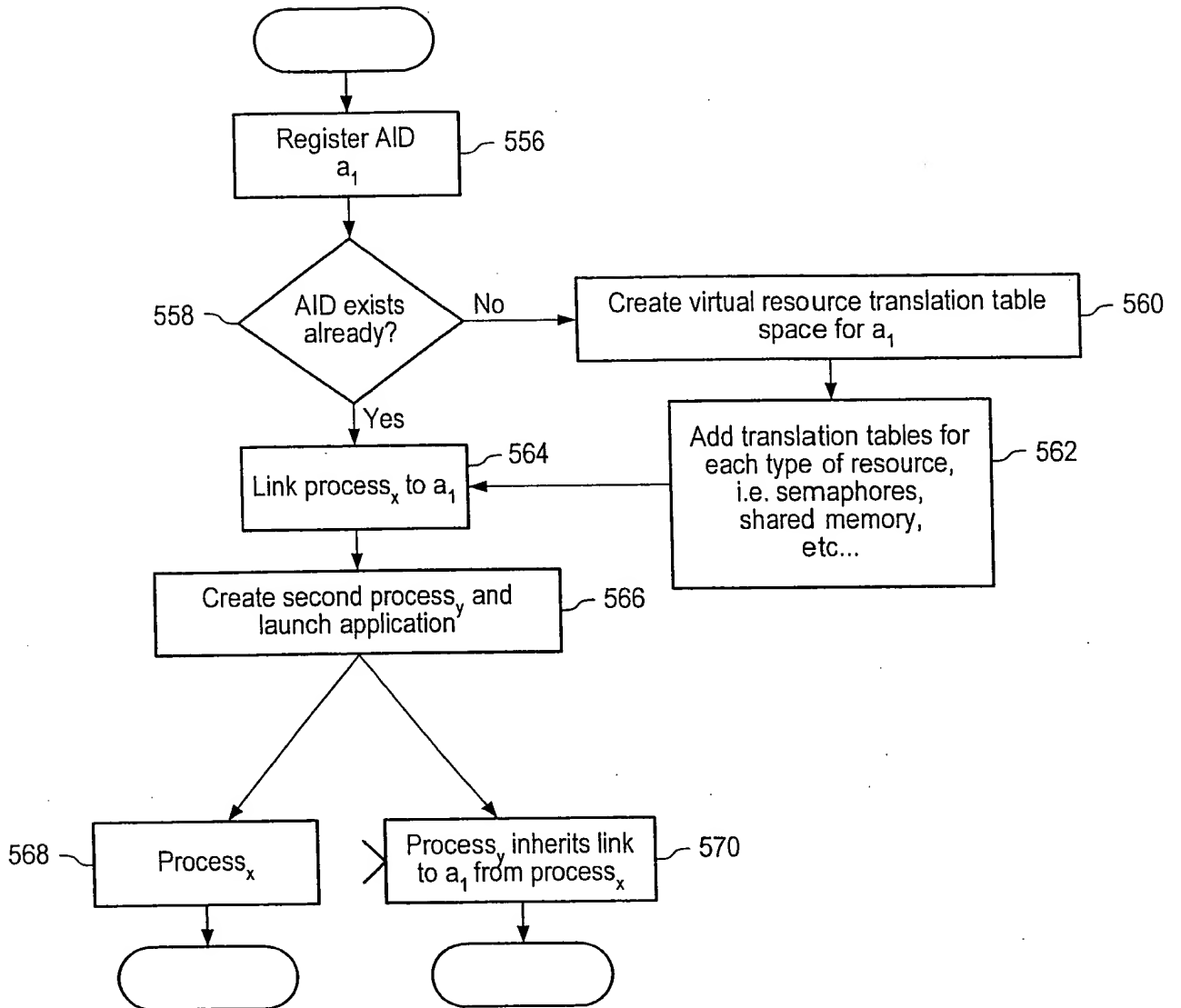
Fig. 12



Reverse Translation of a virtual resource (i.e. semaphore), system to virtual

Fig. 13

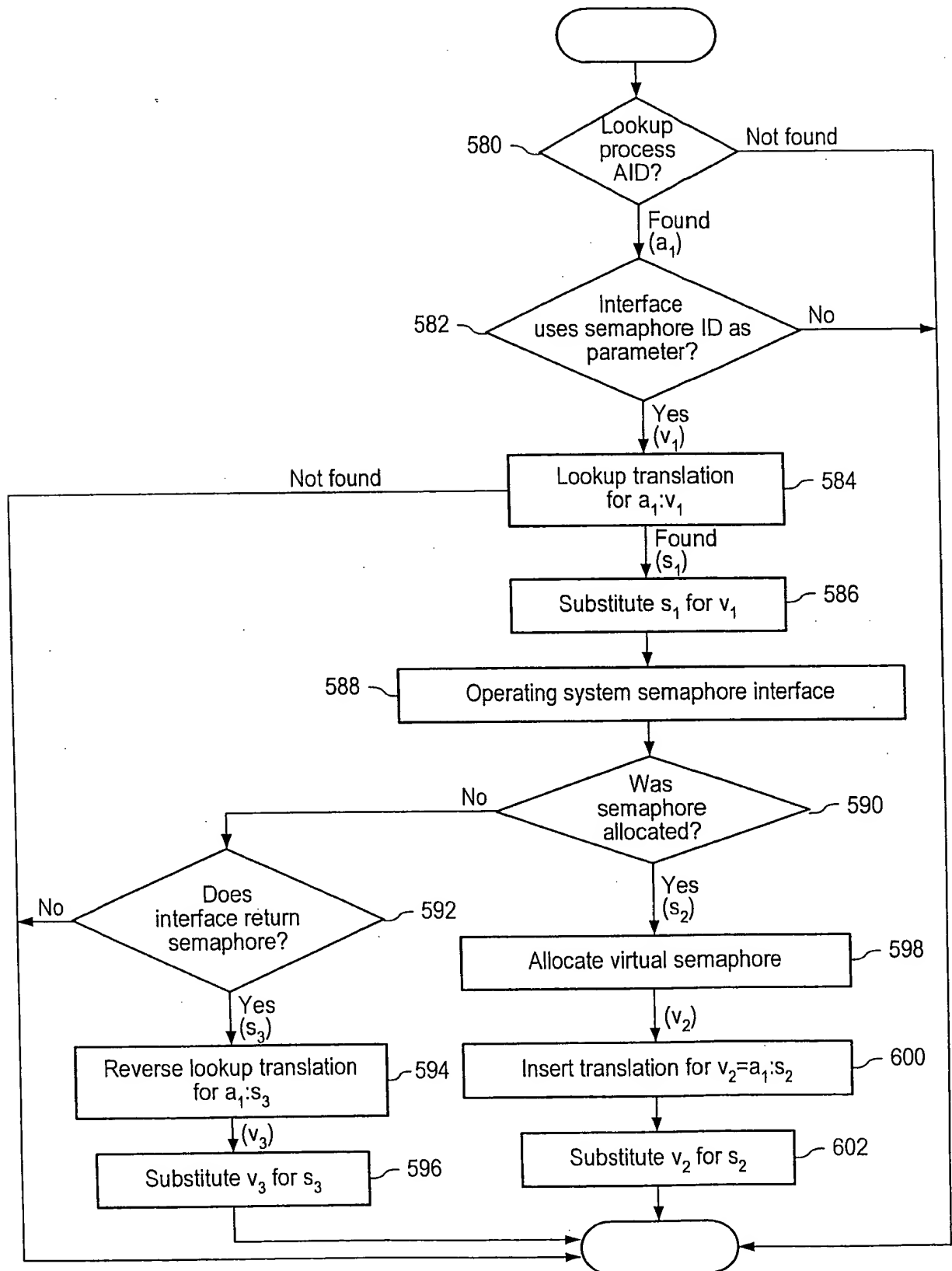
Replacement Sheet



Flowchart describing creation of virtual translation tables

Fig. 14

Replacement Sheet



Flowchart depicting translation of a virtual resource (i.e. semaphore)

Fig. 15

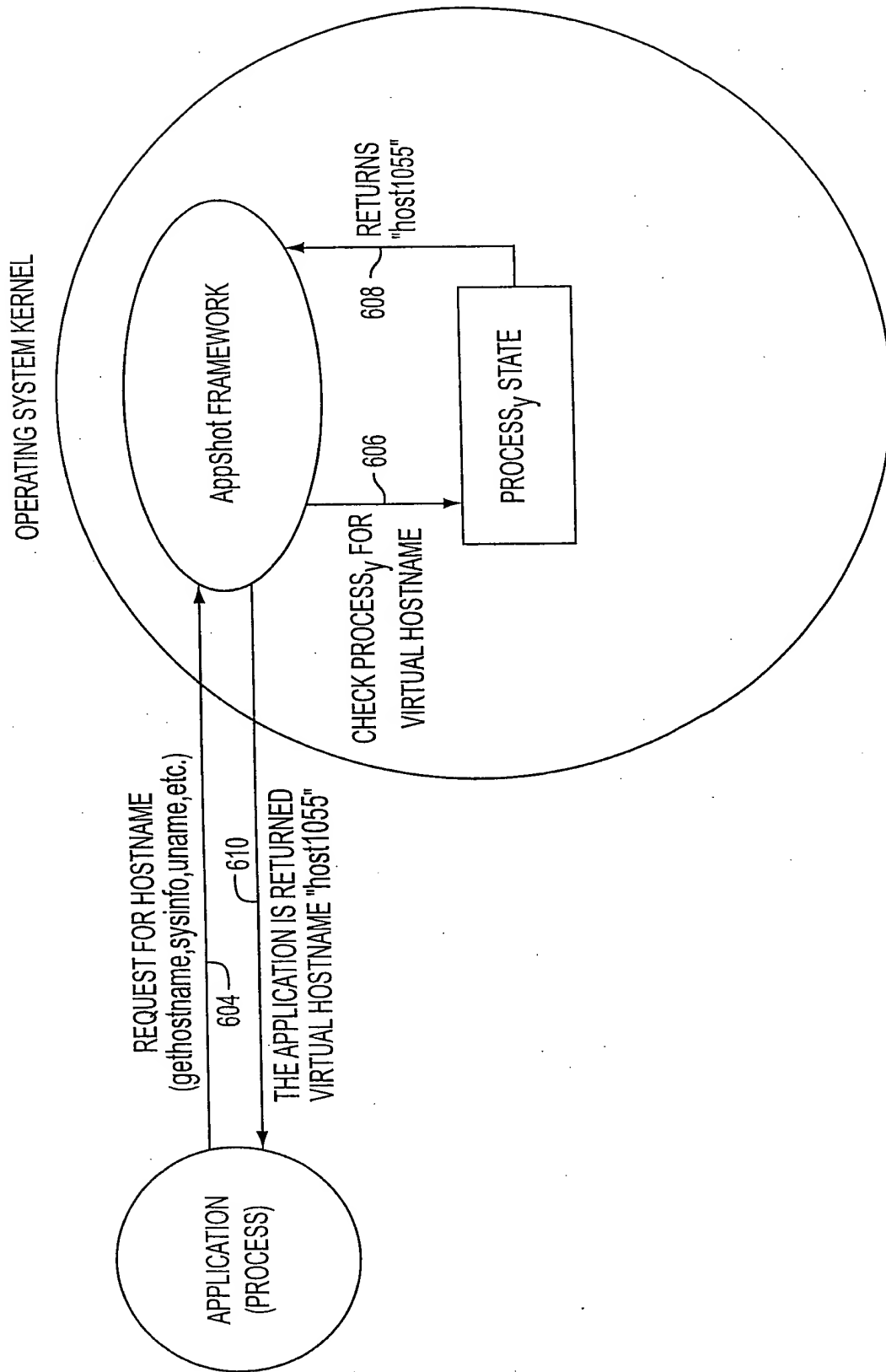


FIG. 16

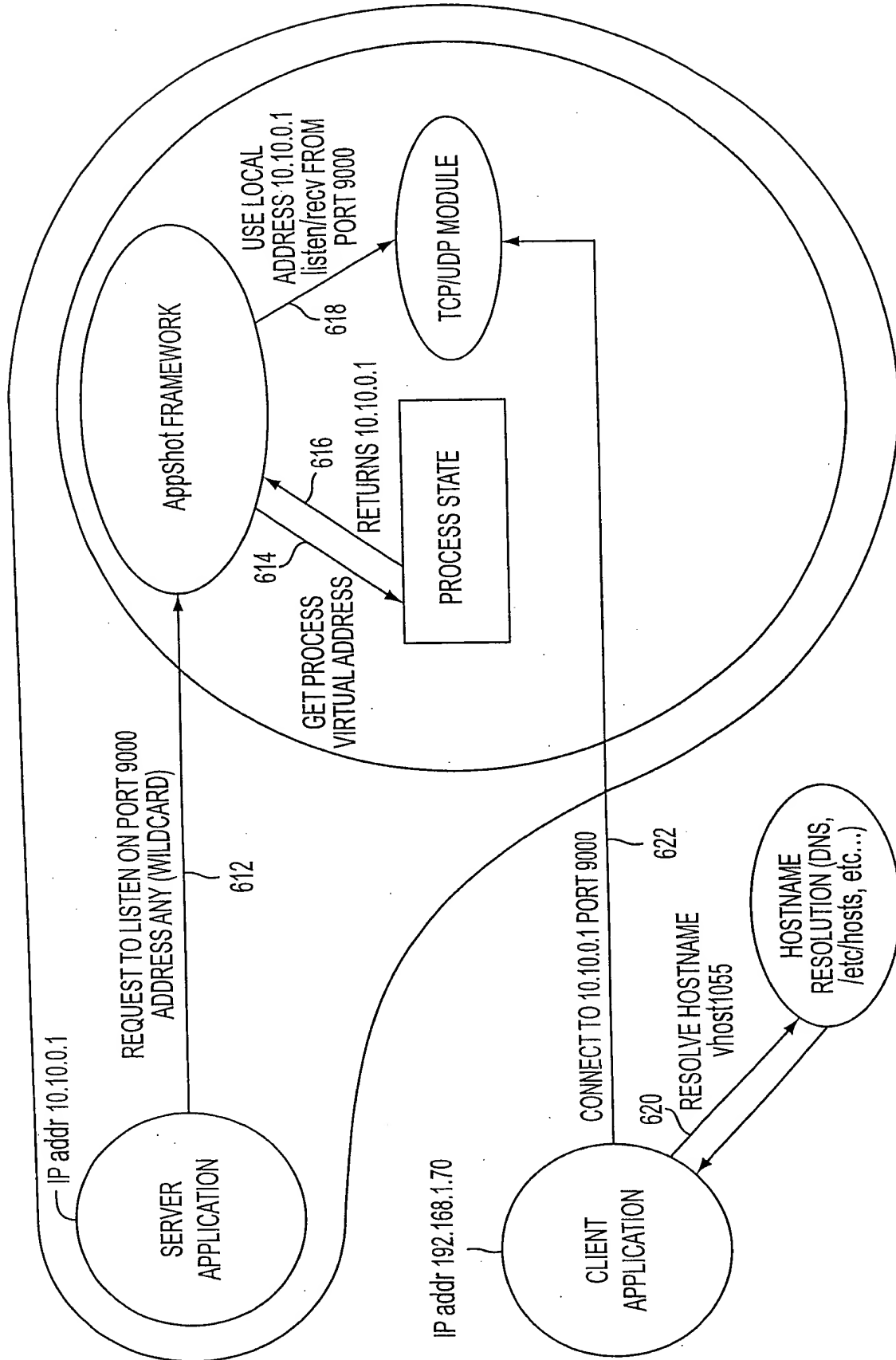


FIG. 17

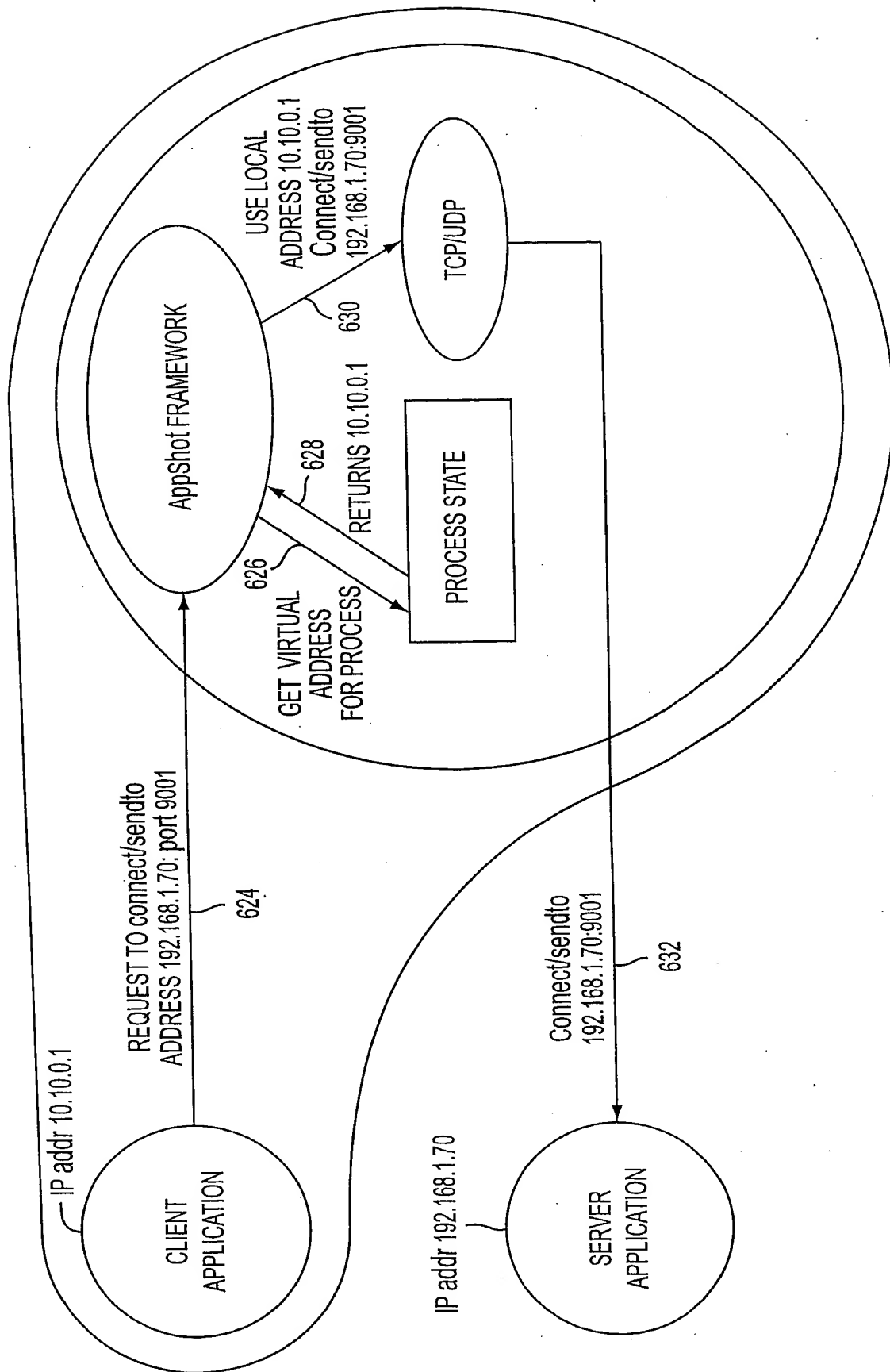


FIG. 18